

EXPERIENCE STUDY – STATE TEACHERS’ RETIREMENT SYSTEM

Summary of Assumptions

The selection of the actuarial assumptions reflects a work in progress. We expect the assumptions shown here will be used in the January 1, 2001 actuarial valuation. However, we will continue to test and refine the assumptions in future years.

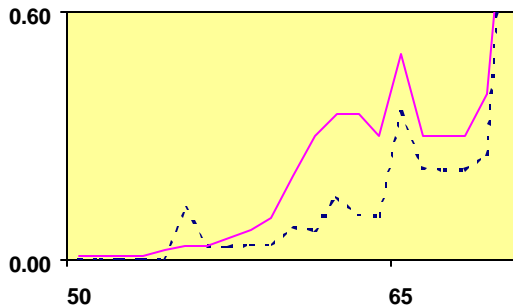
In this section, we show sample rates for each assumption, and where appropriate, an illustration showing a comparison of the current and proposed assumptions. A rate essentially represents the likelihood of an event occurring at a given time. For example, the mortality rates represent the likelihood of death. The complete tables are shown in the Appendix. In all illustrations that follow, the current rates are represented by a dashed line and the proposed rates by a solid line.

1. Rate of Investment Return: Current: 8.25% annually. This assumption is determined by the legislature and was not reviewed as part of this study.
2. Rates of Retirement: The following table and graphs compare current and proposed retirement rates for males and females respectively. The proposed assumptions are gender specific and service based (rates based on whether a member retires with 20 years of service). The proposed rates are less than the current rate at age 55 and generally greater than the current rates at other ages. The proposed rates increase total plan cost.

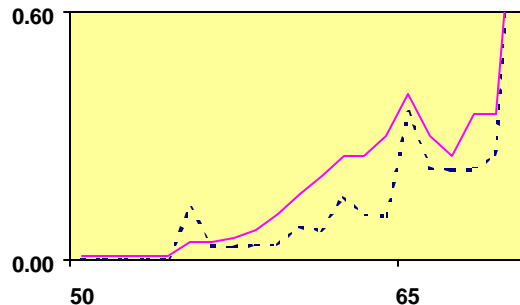
Age	Current	Proposed (service based)			
		Male		Female	
		Less than 20	20 +	Less than 20	20 +
50	.0000	.00	.01	.00	.01
55	.1255	.02	.03	.02	.04
60	.0784	.12	.20	.12	.16
65	.3568	.40	.50	.40	.40
70	1.0000	1.00	1.00	1.00	1.00

The graphs below show the rates for teachers with more than 20 years of service.

Male



Female



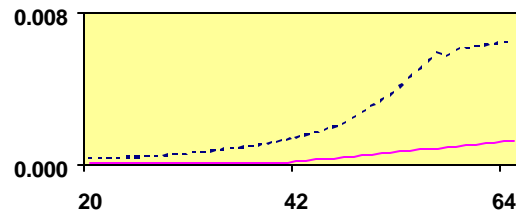
EXPERIENCE STUDY – STATE TEACHERS’ RETIREMENT SYSTEM

Summary of Assumptions (continued)

3. Rates of Disability:

The following table and graph shows that the proposed disability rates are less than the current rates. The proposed rates decrease total plan cost. See the Appendix for complete proposed table. Also, we propose an assumption that 35% of disabilities will be job-related. The proposed rates decrease total plan cost.

<u>Age</u>	<u>Current</u>	<u>Proposed</u>
20	.0003	.00004
30	.0006	.00006
40	.0012	.00010
50	.0031	.00050
60	.0061	.00100



4. Rates of Withdrawal:

Current rates are strictly age based. Proposed rates are gender distinct and both age and service based for the first 10 years of service. General trend for members with 0-5 years of service is that rates increase from age 20 to early 30's and decrease with age thereafter. The maximum assumed rate is 0.15. For members with service greater than 5 years, rates generally decrease with age. For service after 10 years, males slightly increase with age. The proposed rates decrease total plan cost.

<u>Age</u>	<u>Current</u>	<u>Proposed (after 10 years)</u>	
		<u>Male</u>	<u>Female</u>
20	.0960	---	---
30	.0444	.010	.040
40	.0185	.015	.031
50	.0117	.019	.019

EXPERIENCE STUDY – STATE TEACHERS’ RETIREMENT SYSTEM

Summary of Assumptions (continued)

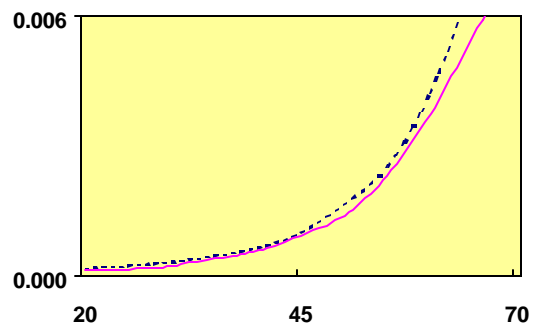
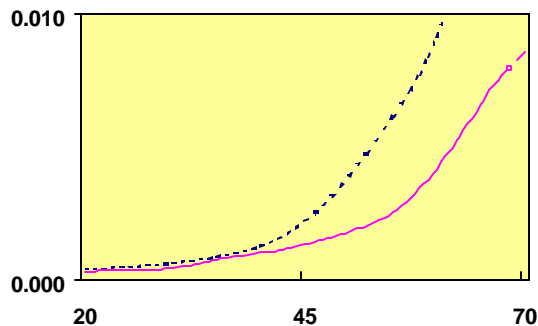
5. Rate of Salary Increase: The following tables and graph compares current and proposed salary increase rates. The proposed rates are less than the current rates after 5 years of service. The proposed rates decrease total plan cost.

<u>Service</u>	<u>Current</u>	<u>Proposed</u>
0	6.00%	9.50%
1	6.00%	8.50%
2	6.00%	8.00%
3	6.00%	7.50%
4	6.00%	7.00%
5	6.00%	6.75%
10	6.00%	5.50%
15	6.00%	5.00%
20	6.00%	5.00%
25+	6.00%	4.75%

6. Pre-Retirement Mortality: Current rates of mortality are in accordance with the 83 Group Annuity Mortality (GAM83) table. The proposed rates reflect the RP-2000 Employees table projected 10 years with Scale AA.

The following table and graphs compare current and proposed mortality rates for active males and females respectively. The proposed male table indicates lower mortality rates and reflects longer life expectancy than the current table. The proposed female table reflects a slightly longer life expectancy than the current table. The proposed rates increase total plan cost.

<u>Age</u>	<u>Male</u>		<u>Female</u>	
	<u>Current</u>	<u>Proposed</u>	<u>Current</u>	<u>Proposed</u>
20	.000377	.000285	.000189	.000163
30	.000607	.000422	.000342	.000239
40	.001238	.000996	.000665	.000607
50	.003909	.001783	.001647	.001412
60	.009158	.004151	.004241	.003739



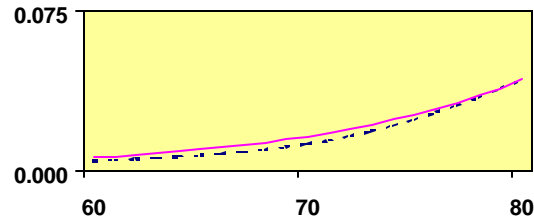
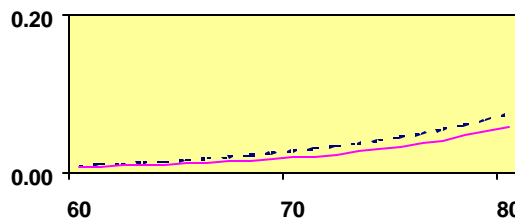
EXPERIENCE STUDY – STATE TEACHERS’ RETIREMENT SYSTEM

Summary of Assumptions (continued)

7. Post-Retirement Mortality: Current rates of mortality are in accordance with the 83 Group Annuity Mortality (GAM83) table. The proposed rates reflect the RP-2000 Healthy Annuitant table projected 10 years with Scale AA for males. For disabled members, current rates are in accordance with GAM83 with rates set forward 10 years. The proposed rates reflect the RP-2000 table set forward 3 years for males.

The following table and graphs compare current and proposed mortality rates for non-disabled retired males and females respectively. The proposed male table reflects a slightly longer life expectancy than the current tables. The proposed female table reflects a slightly shorter life expectancy than the current tables. The proposed rates increase total plan cost.

<u>Non Disabled</u>	<u>Male</u>		<u>Female</u>	
<u>Age</u>	<u>Current</u>	<u>Proposed</u>	<u>Current</u>	<u>Proposed</u>
60	.009158	.006975	.004241	.005897
70	.027530	.019091	.012385	.015923
80	.074070	.058213	.042945	.042767
90	.166307	.176202	.111750	.127784



The following table and graphs compare the current and proposed mortality rates for disabled retired males and females respectively. The proposed male and female tables reflect a slightly longer life expectancy than the current tables. The proposed rates increase total plan cost.

<u>Disabled</u>	<u>Male</u>		<u>Female</u>	
<u>Age</u>	<u>Current</u>	<u>Proposed</u>	<u>Current</u>	<u>Proposed</u>
60	.027530	.01095	.012385	.006200
70	.074070	.03039	.042945	.016742
80	.166307	.08971	.111750	.045879
90	.319185	.23366	.295187	.131682

